

What is claimed:

1. A method for applying a high melting point material thermally sprayed onto a substrate having a distortion temperature below the temperature of the thermal spray material at the surface of the substrate comprising:

(a) preparing a substrate with a contour of a desired shape;

(b) applying an adhesive promoter layer on at least a portion of the substrate; and

(c) applying a thermal spray material onto the adhesive promoter layer wherein said thermal spray material having a temperature at the surface of the adhesive promoter coated substrate below the temperature at which the substrate would distort so as to provide a material coated layer surface having the contour as the design shape of the substrate.

2. The method of claim 1 wherein the thermal spray material is a metal selected from the group comprising steels, stainless steels, nickel, chromium, tungsten, aluminum, alloys thereof, pseudoalloys thereof and compounds thereof.

3. The method of claim 1 wherein the adhesive promoter is selected from the group comprising epoxies, silicones, urethanes, cyanoacrylates, and polyvinyl acetate.

4. The method of claim 3 wherein the thickness of the adhesive promoter is between about .0001 inch and about .020 inch.

5. The method of claim 2 wherein the thickness of the metal is between about 0.0001 inch and about 1 inch.

6. The method of claim 2 wherein the part substrate is selected from the group comprising wax, wood, plastic, foam, plaster, epoxy and composites.

7. The method of claim 2 wherein the metal is steel, the adhesive promoter is a polyvinyl acetate and the substrate is fiber composite.

8. The method of claim 7 wherein the thickness of the adhesive promoter is between about 0.0001 inch and about 0.020 inch.

9. The method of claim 7 wherein the thickness of the metal is between about 0.001 inch and about 1 inch.

10. A metal coated substrate made using the method of claim 1.

11. The metal coated substrate of claim 10 wherein the said metal coated substrate is a printing roll.

12. The method of claim 1 wherein after step (b) the adhesive promoter coated layer substrate is coated with a bonding layer.

13. The method of claim 12 wherein the bonding layer has a thickness between about 0.0005 inch and about 0.050 inch.

14. The method of claim 13 wherein the bonding layer is selected from the group comprising zinc, nickel, steel, chromium, aluminum, and alloys of such materials.

15. The method of claim 1 wherein the adhesive promoter is a releasable agent.

16. The method of claim 15 wherein the releasable agent is polyvinyl acetate,.

17. The method of claim 15 wherein after step (b) the adhesive promoter coated layer substrate is coated with a bonding layer.

18. The method of claim 15 wherein the substrate is selected from the group comprising wax, wood, plastic, epoxy and composites.

19. The method of claim 18 wherein the thickness of the adhesive promoter is between about 0.0001 inch and about 0.020 inch.

20. The method of claim 19 wherein the thickness of the metal is between about 0.0001 inch and about 1 inch.